



PhD Studentship: Low fidelity sensing to improve the performance of specialist workboats in off design situations

Application Deadline: 3rd March 2023

Anticipated Start Date: September 2023

Application and Funding Details: See <https://research.ncl.ac.uk/marinezero/applicants/>

A funded PhD studentship is available supported by the [Doctoral Programme for Zero Emission Marine Technology](#) and in partnership with Svitzer. The studentship is jointly supported by the Willis Endowment Fund and the Stone Marine - Sasaki Fund.

Maritime assets such as cargo ships are now equipped with data rich sensing equipment that provides detailed information of the complex onboard systems to improve and optimise aspects of vessel performance such as fuel consumption. However, this high-fidelity data is less useful on certain specialist workboats such as tugs, lifeboats and fishing craft which regularly operate in transient “off design” situations where there is no baseline or steady state from which to understand trends and changes. Furthermore, these vessels often undertake unusual operations with complex risks such as towing, escorting, lifting and station keeping.

The PhD project will investigate the use of low fidelity sensing devices that can be used to improve the performance and safety in specialist workboat situations. We envisage the sensing equipment to be equivalent to smart phone technology including GPS, gyroscope, camera and Bluetooth. The project will have access to workboats operated by the industry partner, Svitzer, and will potentially extend to other vessels.

The applicant will be trained to a high technological standard and possess skills essential for the growth of the UK economy. In particular, the applicant will develop high technical proficiency in workboat design, maritime operations, experimental testing, data acquisition and processing.

The applicant is expected to have a 2.1 or 1st class honours degree in an appropriate engineering or science discipline. It would be desirable for the applicant to have a background understanding of naval architecture, experimental hydrodynamics, instrumentation and/or data processing.

This award is available to **UK/EU** and **international candidates**.

Supervisors: **Dr Simon Benson** and **Dr Kayvan Pazouki**

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